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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,818	10/01/2003	Masahiro Yamamoto	088473-0154	8776
22428	7590	06/16/2006	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			BALDWIN, KATHLEEN C	
			ART UNIT	PAPER NUMBER
			3682	

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/674,818

Applicant(s)

YAMAMOTO ET AL.

Examiner

Kathleen Baldwin

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/1/03</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: page 7, line 18, spelling error, "...upper limit of torque is ...".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The disclosure does not explicitly disclose details of the smoothing process of the signals.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re clm 4, the term ""smoothing processing" in line 2 is indefinite. What is smoothing processing of the signal?

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-5, and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Tokoro et al. (US Patent Number 4,631,043).

Re clm 1, 4, and 7, Tokoro ('043) discloses a system for controlling a V-belt type continuously variable transmission (CVT) (4) for a vehicle, comprising: a source of a line pressure (c1, l 9-10), primary (6,7) and secondary (8,9) pulleys arranged on input and output sides, the pulleys being subjected to primary-pulley and secondary pulley pressures produced from the line pressure, a V-belt (11) looped over the primary (6,7) and secondary (8,9) pulleys (see figure 10), the V-belt (11) engaging in V-grooves of the primary (6,7) and secondary pulleys (8,9) , the V-grooves being changed in width through a differential pressure between the primary-pulley (6,7) and secondary-pulley (8,9) pressures to achieve a target shift ratio of the CVT (c2, l29-46); and an electronic control unit (ECU) (100) which controls the line pressure, the ECU (100) being programmed to: input a

first torque signal (from torque sensor 29) obtained by estimating an engine torque in accordance with vehicle operating conditions and the target shift ratio (c4, l32-46, c2, l29-46); input a second torque signal (from torque sensor 30) obtained by detecting the engine torque, synthesize the first and second torque signals to provide an estimated-torque signal (c2, l40; a ratio is calculated), and control the line pressure in accordance with the estimated-torque signal (c2, l29-46).

Re clm 2, 5, and 8, ToKoro ('043) discloses the ECU is further programmed to set the first torque signal as the estimated-torque signal when the engine torque rises (inherent, if not disclosed).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokoro ('043) in view of Hendriks et al. (US Patent 5,431,602).

Re clm 3, 6, and 9, Tokoro ('043) discloses all of the claim limitations (as described above).

Tokoro ('043) does not disclose the ECU is further programmed to: subject the first torque signal to differential processing and smoothing processing; determine a sum of the first torque signal as subjected and the second torque signal, and determine a greater one of the first and second torque signals, determine a smaller one of the sum and the greater one; and set the smaller one as the estimated-torque signal.

Hendriks ('602) teaches an ECU that subjects the first torque signal to differential processing and smoothing processing (averaging device 22 and summing device 25); determine a sum of the first torque signal as subjected and the second torque signal and determine a greater one of the first and second torque signals(summing device 25; c 6, l 50-60; c 7, l 15-25), determine a smaller one of the sum and the greater one; and set the smaller one as the estimated-torque signal (c 6, l1-27). Hendriks ('602) teaches the advantage of the processing of the control units is improved efficiency and an extended life (c1, l 37-41).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the ECU of Tokoro ('043) to subject the first torque signal to differential processing and smoothing processing; determine a sum of the first torque signal as subjected and the second torque signal, and determine a greater one of the first and second torque signals, determine a smaller one of the sum and the greater one; and set the smaller one as the

estimated-torque signal, as taught by Hendriks ('602), to improve the efficiency and life of the system.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hendriks (5,337,628), Matsuda (5,776,028), Asayama (6,454,675) and Yamamoto (6,919,269) disclose a CVT system with an ECU that controls the line pressure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen Baldwin whose telephone number is 571-272-8973. The examiner can normally be reached on 7:30am-5pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KB 6/7/06

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RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER